IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Applicant:

Udayakumar et al.

Application No.: 10/635,994 Filed:

August 7, 2003

For:

LOW SILICON-HYDROGEN SIN LAYER TO INHIBIT HYDROGEN RELATED DEGRADATION IN SEMICONDUCTOR DEVICES HAVING

FERROELECTRIC COMPONENTS

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

1. Pursuant to 37 C.F.R. 1.97 and 1.98, and in compliance with 37 C.F.R. 1.56, the Office's attention is directed to the patents, pending applications, publications and other information listed on the attached PTO-

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Statement.

submission under 37 C.F.R. 1.129(a).

Sir:

previously cite	of each listed document is enclosed except for: (a) pending applications or (b) those dor submitted to the Office in the following application(s) upon which this application relies for date under 35 U.S.C. 120:
Serial No.: Filing Date	
PTO-1449, Aptreated accord	y document, publication or other information for which a date is not given on the attached oplicant(s) believe(s) the same may qualify as "prior" art to this application and should be dingly, although Applicant(s) reserve(s) the right to contest the prior art status of any olication or information, should issue arise.
accompanies	ng each listed document that is not in the English language, an English-language translation this Statement as indicated on the attached PTO-1449 or a concise explanation of the document is set forth in the following document(s):
(a)	Copy of each English language version of a search report indicating the degree of relevance found by the foreign office of each document being submitted from the search report.
(b)	Attachment entitled "Concise Explanation of Relevance of Non-English Language Documents".
3. Pursuar	t to 37 C.F.R. 1.97(b) this Statement is being filed (one must be checked):
(a)	Within 3 months of the filing date or date of entry into the National Stage.
(b) <u>X</u>	Before the mailing date of a first Office Action on the merits. If this Statement is not filed before the mailing date of a first Office Action on the merits, the required certification is given below or, in the absence thereof, the Office is authorized to charge the required fee set forth in 37 C.F.R. 1.17(p) to Deposit Account No. 20-0668 for consideration of this

Before the mailing date of a first Office Action on the merits after a first or second

(d)	After the period set forth in 37 C.F.R. 1.97(b) but before the mailing date of either a final action or a notice of allowance.
(1)	_ The required certification is given below, or
(2)	Enclosed is a check covering the fee set forth in 37 C.F.R. 1.17(p) for consideration of this Statement, or
(3)	_ Charge the fee set forth in 37 C.F.R. 1.17(p) to Deposit Account No. 20-0668
(e)	After the mailing date of either a final action or a notice of allowance, but before payment of the issue fee. Petition hereby is made for consideration of this Statement and the required certification is indicated below.
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(2)	Charge the fee set forth in 37 C.F.R. 1.17(i)(1) to Deposit Account No. 20-0668.
4. Certifica	tion (if applicable)
(a)	The undersigned hereby certifies that each item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than 3 months prior to the filing of this Statement.
(b)	The undersigned hereby certifies that no item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application or to the undersigned's knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. 1.56(c) more than 3 months prior to the filing of this Statement.
	nmissioner is hereby authorized to charge any additional fees or credit any overpayment to
Deposit Accou	nt No. 20-0668. Respectfully Submitted,
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/11	Substitute f	or Form 1449A/PTO		Application Number	10/635,994			
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		U,S. Patent Do	ocument	Name of Patentee or	Date of Pub. of		
Exam. Initials*	Cite No.1	Number	Kind Code ² (if known)	Applicant of Cited Doc.	Cited Doc. (mm-dd-yyyy)	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
	AA	5,452,178		Emesh et al.	09/19/1995	Entire Document	
	AB	5,972,722		Visokay et al.	10/26/1999	Entire Document	
	AC	6,090,697		Xing et al.	07/18/2000	Entire Document	
	AD	6,144,060	_	Park et al	11/07/2000	Entire Document	
	AE	6,177,351	B1	Beratan et al.	01/23/2001	Entire Document	
	AF	6,225,656	B1	Cuchiaro et al.	05/01/2001	Entire Document	
	AG	6,242,299	B1	Hickert	06/05/2001	Entire Document	
	AH	6,261,967	B1	Athavale et al.	07/17/2001	Entire Document	
	Al	6,291,251	B1	Nam	09/18/2001	Entire Document	
	AJ	6,423,592	B1	Sun	07/23/2002	Entire Document	
	AK	6,495,413	B2	Sun et al.	12/17/2002	Entire Document	
	AL	6,528,386	B1	Summerfelt et al.	03/04/2003	Entire Document	
	AM	6,534,809	B2	Moise et al.	03/18/2003	Entire Document	
	AN	6,611,014	B1	Kanaya et al.	08/26/2003	Entire Document	
	AO	2001/0034106	A1	Moise et al.	10/25/2001	Entire Document	
	AP	2001/0044205	A1	Gilbert et al.	11/22/2001	Entire Document	

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Exam.	Cite No.1	Office ³	oreign Patent Doo Number ⁴	kind Code ² (if known)	Name of Patentee or Applicant of Cited Doc.	Date of Pub. of Cited Doc. (mm-dd-yyyy)	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T⁵
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	,	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Exam. Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	CA	"FeRAM Tutorial", ALI SHEIKHOLESLAMI and P. GLENN GULAK, A survey of circuit Innovations in Ferroelectric random-access memories, Proceedings of the IEEE, Vol. 88, No. 3, May, 2000, 3 pages, taken from the Internet at: http://www.eecg.toronto.edu/-ali/ferro/tutorial.html.	
	СВ	"A survey of Circuit Innovations in Ferroelectric Random Access Memories", ALI SHEIKHOLESLAMI and P. GLENN GULAK, Proceedings of the IEEE, Vol. 88, No. 5, May, 2000, pp. 667-689.	
	СС	"Generic CVD Reactor", CVD Basics, DANIEL M. DOBKIN, Dec. 7, 2001, 3 pages, taken from th Internet at: http://www.batnet.com/enigmatics/semiconductor_proc_ssing/CVD_Fundam_ntals/introdu	
	CD	"Physical Vapor Deposition", Cougar Labs, Inc., Dec. 7, 2001, 9 pag s, taken from the Int rnet at: http://www.cougarlabs.com/pvd1.html.	

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Approved for use through 10/31/2002. OMB 0651-0031 Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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	STATEMENT BY APPLICAN				First Named Inventor	Udayakumar et al.
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		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Exam. Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	CE	"Parasitic Channel Induced by Spin-On-Glass in a Double-Level Metallization Complimentary Metal Oxide Semiconductor Process", M. MURATA, K. YOMAUCHI, H. KOJIMA, A. YOKOYAMA, T. INOUE and T. IWAMORI, published in the Journal of Electrochemical Society, Volume 149, No. 8, 1993, pgs. 2346-2356.	
	CF	"Effects of Oxygen Content on Properties of Silicon Oxide Films Prepared at Room Temperature by Sputtering-Type Electron Cyclotron Resonance Plasma", KATSUHIKO FURUKAWA, YICHUN LIU, HIROSHI NAKASHIMA, DAWEI GAO, YASUHIRO KASHIWAZAKI, KIICHIRO UCHINO, KATSUNORI MURAOKA and HIROHISA TSUZUKI, Journal of Applied Physics, Volume 84, Number 8, October 15, 1998, pp. 4579-4584.	
	CG	Notes taken at the International Symposium on Applications of Ferroelectrics Conference in Nara, Japan in May, 2002. The speaker was H. Nagel of Infineon Technologies and Toshiba Corporation, Key Technologies for High Density FeRAM Application, one page.	
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¹Unique citation designation number. ²Applicant is to place a check mark here if English Translation is attached.